

**SURVEY OF INTERNET USAGE
SPRING 1995**

Final Report

Bureau of the Census

August 1995

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SUMMARY

In spring 1995, the Census Bureau published a one-page questionnaire in its monthly bulletins, *Census and You* and the *Monthly Product Announcement*. Staff also photocopied the survey and distributed it at various user meetings. The questionnaire dealt with access to the Internet, or lack of access for some, and preferences for future product delivery. Some 516 questionnaires were returned as part of this voluntary survey.

Almost 4 out of 10 respondents represented academic /research organizations; the governmental sector made up more than 3 out of 10 respondents.

The majority of the respondents were familiar with Internet, with almost half of total respondents indicating that they accessed it once a day; 80 percent were on once a week or more.

Use of the Internet was highest among college and university faculty and lowest among those working in market research and advertising.

E-mail was the application most used by respondents, cited by 92 percent of those that accessed Internet. More than half indicated that they used the ftp protocol, an indication of the sophistication of the respondent universe.

Summary data files and information about new products were the types of information that most respondents found useful on the Internet, followed by key highlights and the text of printed reports.

The overwhelming majority (71 percent) of respondents indicated that they accessed the Internet through a school or work node. The business sector showed the most diverse access and use of commercial services.

About 14 percent of respondents indicated that they did not currently have Internet access. The reasons most frequently cited for not using the Internet were lack of hardware/software, lack of access, and lack of knowledge. However, 70 percent of those responding to a follow-on question indicated that they expected to have access within a year.

Although many respondents were technologically sophisticated and knowledgeable Internet users, they indicated preferences for Census Bureau products in formats other than Internet. While 79 percent indicated Internet as the medium for receiving or accessing Census Bureau information in the future, only slightly less--77 percent--expressed a preference for CD-ROM and 64 percent of respondents had a preference for printed reports.

Methodology

To reach a broad base of census data users, the Census Bureau published a questionnaire in two Census Bureau newsletters and further distributed the form at several meetings and conferences. Recipients of the survey included:

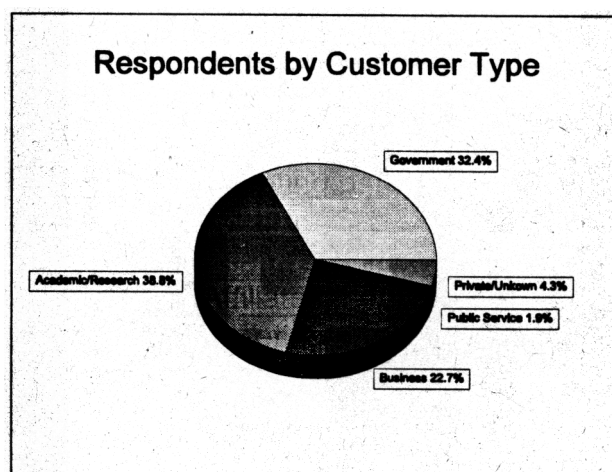
- o Subscribers to the March 1995 *Census and You*, the Census Bureau's monthly newsletter. *Census and You* distribution included approximately 8,500 paid and free subscriptions. Free subscriptions are provided to organizations participating in the state data center, business and industry data center, and census information center programs, as well as advisory committees, and other organizations. Publication in *Census and You* resulted in 167 completed questionnaires.
- o Subscribers to the April 1995 *Monthly Product Announcement*. The *Monthly Product Announcement*, a monthly catalog of new products in all media, is provided free to all requestors. Subscribers totaled approximately 5,000 in April, including data center participants, advisory committee members and other organizations. Publication in the *Monthly Product Announcement* resulted in 153 completed questionnaires.
- o Visitors to the Census Bureau exhibit at the Population Association of America annual meeting, held in San Francisco, CA, April 6-8, 1995. As a result of this meeting, 104 forms were returned. The survey form distributed at this conference also included on the reverse side some additional questions regarding the respondent's use of Census Bureau printed reports and media preferences.
- o 50 participants at the 8th Annual Interagency Depository Library Seminar, held at the U.S. Government Printing Office on May 5. Participants represented local depository libraries and were generally new to government documents. This meeting yielded 12 completed forms.
- o Over 400 participants of the Federal Depository Library Conference, held in Arlington, Virginia, April 10-13, 1995. Participants are generally experienced librarians of large university and public libraries. Thirty-three completed questionnaires were received as a result of this meeting.
- o Visitors to the Census Bureau's exhibit at the annual meeting of the Association of College and Research Libraries, held in Pittsburgh, PA, March 29-April 1, 1995. While an estimated 200 of the 2,023 meeting participants visited the Census Bureau booth, only one completed questionnaire resulted.

- o Participants at the annual New York State Data Center Affiliates meeting, held May 4, 1995, in Troy, New York. Eighteen of the 45 meeting participants completed the questionnaire.
- o Participants at the annual Texas State Data Center Affiliates meeting, held April 27-29, 1995 in Austin, Texas. Twenty-two of the 50 meeting participants returned completed questionnaires.

Question 8 asked respondents to indicate the business sector in which they worked. Ninety-seven percent of respondents indicated their affiliation. Tabulations in this report that show customer type are basically cross tabulations of Question 8 with no additional independent coding for customer type or affiliation with any data dissemination program such as the state data center or Federal Depository Library Programs. Nor was any attempt made to determine whether respondents worked in the organization's library, a factor generally included in most analyses of Census Bureau customers.

The academic sector was well represented in the survey, accounting for almost 4 out of 10 respondents; State and local government organizations about three out of ten. Business represented about two out of ten. There were 20 respondents who did not indicate any organizational affiliation.

Table 1 on the following pages presents a breakout of survey respondents by customer group and type.



Assumptions and Limitations

The survey was not designed to measure Internet access by all data users. The survey universe was basically self-selecting. From the responses, we can assume that the majority of respondents were quite familiar with Internet and comfortable in using it. [Almost half of the respondents indicated that they used Internet at least once a day; another 32 percent accessed the Internet one or more times a week.] Data users with no access are likely underrepresented in this survey.

Table 1: Respondents to Survey by Source and Customer Type				
Customer Type	Census & You	Monthly Product Announcement	Population Association of America	Depository Library Conference
Private Citizen	0	2	0	0
GOVERNMENTAL SECTOR	63	52	9	6
Federal Gov't	3	2	7	0
State or Local Gov't.	60	50	2	6
ACADEMIC/RESEARCH	50	44	71	21
College/University Faculty	27	25	56	12
Other Academic	23	19	15	9
BUSINESS SECTOR	49	50	17	1
Media (Radio, TV, Print)	4	1	1	0
Market Research/Advertising	19	21	6	0
Other Business	26	28	10	1
PUBLIC SERVICE SECTOR	2	4	2	1
Religious, civic or political association	2	4	2	1
No Response	3	1	11	4
TOTAL	167	153	110	33

Table 1, con't: Respondents to Survey by Source and Customer Type.					
Customer Type	Depository Library Seminar	College & Research Libraries	New York SDC	Texas SDC	Total
Private Citizen	0	0	0	0	2
GOVERNMENTAL SECTOR	5	1	13	18	167
Federal Gov't	1	0	0	0	13
State or Local Gov't.	4	1	13	18	154
ACADEMIC/RESEARCH	7	0	3	4	200
College/University Faculty	5	0	2	0	127
Other Academic	2	0	1	4	73
BUSINESS SECTOR	0	0	0	0	117
Media (Radio, TV, Print)	0	0	0	0	6
Market Research/Advertising	0	0	0	0	46
Other Business	0	0	0	0	65
PUBLIC SERVICE SECTOR	0	0	1	0	10
Religious, civic or political association	0	0	1	0	10
No Response	0	0	1	0	20
TOTAL	12	1	18	22	516

Questionnaire Design

Staff from Population Division, the Special Information Products Staff and the Training Education and Marketing Staff of the Data User Services Division, and the DIAMOND Staff developed a questionnaire to measure the use of the Internet by Census Bureau customers and to determine customer preferences for future data delivery through this medium.

A copy of the survey questionnaire is included as *Appendix A*.

Survey Operations

The 1-page questionnaire was printed in the March issue of *Census and You*, and in the April *Monthly Product Announcement*. Since this was a voluntary survey that appeared in a publication the Office of Management and Budget required no clearance.

Additional copies of the 1-page questionnaire were distributed at several meetings where the Census Bureau exhibited or made presentations. A source code was included in the bottom left-hand corner of the page to indicate the particular event at which the questionnaire was distributed. Most of the completed questionnaires from these sources were returned by Census Bureau staff who attended the particular conference. Several completed questionnaires were also returned by mail.

There were more returns by fax (185) than by mail (170).

Returned questionnaires were logged in, reviewed, and edited. Several write-in entries were recoded to the appropriate category.

No attempts were made to follow up by mail or phone with any subscribers or conference participants who did not respond.

The survey forms included no final response date. However, tabulations are based on all questionnaires received prior to June 1, 1995 .

DATA TABULATION

Staff entered the individual responses into a data base program created using Advanced SurveyPro software. Missing responses were left blank. Write-in responses were recorded and maintained in the database, although some recoding was done.

ACKNOWLEDGEMENTS

The following persons assisted in the development and conduct of the survey: Michael Batutis (Population Division), Larry Carbaugh (Data User Services Division), Joanne Dickinson (Data User Services Division/Director's Office), Valerie Gregg (Director's Office), Lars Johansen (Data User Services Division), Tim Jones (Data User Services Division), John Kavaliunas (Data User Services Division/Director's Office), Robert Kominski (Population Division), Pam Sadowski (Data User Services Division), Neil Tillman (Data User Services Division), Signe Wetrogen (Population Division), and Gary Young (Data User Services Division). Wendy Crawford (Data User Services Division/Director's Office) entered the data and tabulated results. John Kavaliunas prepared the report.

SURVEY RESULTS

User responses to each of the questions in the survey are reviewed in detail below.

Question 1: How often do you access the Internet?

The majority of the respondents to the survey were familiar with the Internet and used it regularly. Almost half the respondents to the survey indicated that they accessed the Internet once a day. Another third said that they accessed it once a week or more. As seen in the chart and Table 2, below, only 14 percent of respondents indicated that they never accessed or had no access to the Internet.

Respondents who answered "Never/no access" were instructed to answer two additional questions that asked why they did not access the Internet.

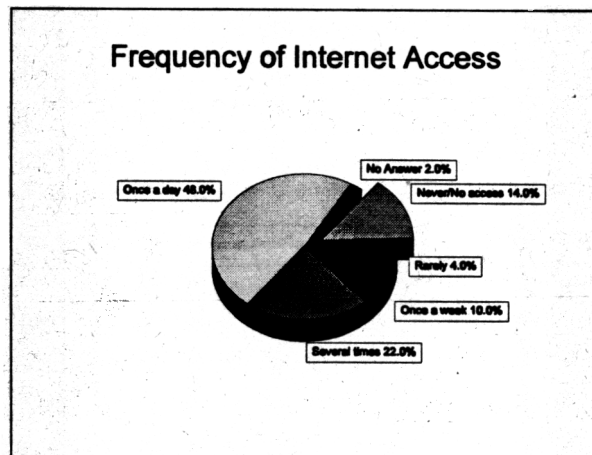


Table 2: Frequency of Accessing the Internet		
	Number of Responses	Percent of Respondents
Once a day	248	48%
Several times a week	114	22%
Once a week	51	10%
Rarely	22	4%
Never/No access	70	14%
No answer	11	2%
Total	516	100%

Use of the Internet was highest in the academic/research sector with 76 percent indicating that they used Internet daily. Within that sector, college and university faculty had the highest rates of daily usage--82 percent.

Internet access was lowest in the governmental and business sectors, with 24 percent of governmental and 20 percent of business respondents indicating they never accessed or had no access to Internet. In contrast, only 1 percent of the academic/research respondents indicated that they did not/could not access.

About half of the New York and Texas State Data Center affiliates indicated they had no access to the Internet.

Use of the Internet by customer types is illustrated in the figure, opposite, and table 3, below.

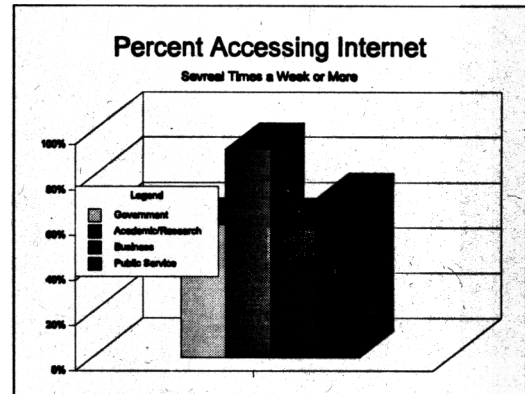


Table 3: Frequency of Internet Access by Customer Type										
Customer Type	Once a day		Several times a week		Once a week		Rarely		Never/No Access	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Private Citizen	2	50%	0	0%	0	0%	0	0%	2	50%
Governmental Sector	57	34%	42	25%	17	10%	11	6%	40	24%
Federal Government	4	44%	3	33%	0	0%	0	0%	1	11%
State or local government	53	33%	39	24%	17	11%	11	7%	39	24%
Academic Research	117	76%	25	16%	8	5%	1	0%	2	1%
College/University faculty	70	82%	10	12%	3	4%	0	0%	2	2%
Other College/University	47	69%	15	22%	5	7%	1	1%	0	0%
Business Sector	35	34%	26	25%	12	12%	8	8%	21	20%
Media	3	60%	1	20%	0	0%	0	0%	1	1%
Market research, advertising	9	22%	10	24%	9	22%	3	7%	9	22%
Other Business	23	40%	15	26%	3	5%	5	9%	11	19%
Public Service Sector	4	40%	3	30%	1	10%	1	10%	0	0%
TOTAL RESPONSES	213	49%	100	23%	38	9%	20	5%	65	15%

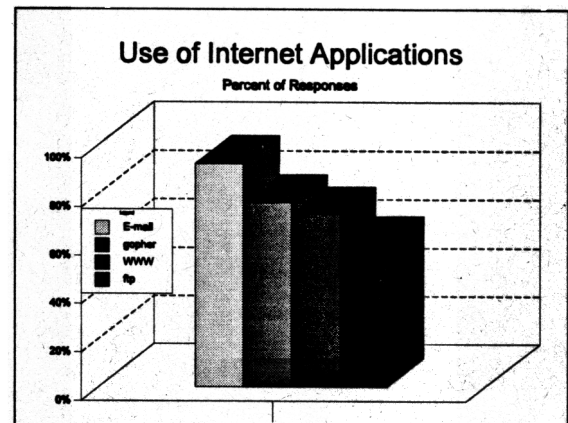
Question 2: What applications do you use on the Internet?

E-mail was the application most used by respondents, cited by 92 percent of those who responded to Question 2.

While 9 out of 10 used Internet for electronic mail, more than 7 out of ten were familiar with gopher and the World Wide Web. Another indication of the sophistication of the respondents was the use of the file transfer protocol or ftp, generally used by experienced Internet users. More than half the respondents indicated that they used the ftp application.

Respondents could indicate all the applications that they used on the Internet.

Ninety-nine persons, reflecting the almost 20 percent who do not use Internet, did not answer this question.



Use of all applications was highest in the academic/research sector. The government sector used E-mail and gopher more than the business sector; however, the business sector used the world wide web and ftp more than the government sector.

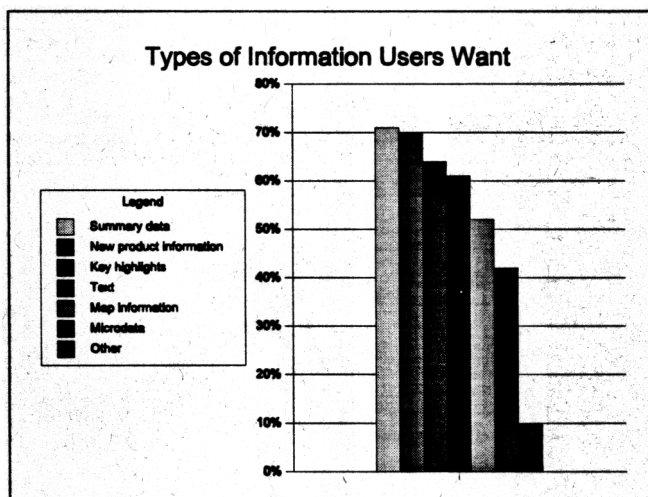
Table 4, below, shows use of the various Internet applications by customer type.

Table 4: Use of Internet Applications by Customer Type										
Customer Type	E-mail		gopher		World Wide Web		ftp		No answer	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Private Citizen	0	0 %	1	100%	1	100%	0	0%	1	50%
Governmental Sector	103	89%	85	73%	72	62%	56	48%	51	31%
Federal Government	10	83%	9	75%	7	58%	4	33%	1	8%
State or local government	93	89%	76	73%	65	63%	52	50%	50	32%
Academic Research	190	97%	158	81%	150	76%	130	67%	5	3%
College/University faculty	118	96%	98	80%	92	75%	86	70%	4	3%
Other College/University	72	100%	60	83%	58	81%	44	61%	1	1%
Business Sector	72	86%	55	65%	59	70%	49	58%	33	28%
Media	3	75%	3	75%	4	100%	2	50%	2	33%
Market research, advertising	26	87%	20	67%	21	70%	19	63%	16	35%
Other Business	43	86%	32	64%	34	58%	28	56%	15	23%
Public Service Sector	7	78%	7	78%	5	55%	4	44%	1	10%
TOTAL RESPONSES	384	92%	315	76%	295	71%	246	59%	99	19%

Question 3: What types of information would be useful to you on Internet?

Respondents were instructed to mark all categories that applied.

Summary data files were listed by 71 percent of respondents to this question, only slightly higher than information about new products mentioned by 70 percent. Slightly less requested key highlights from new reports, the text of printed reports, and geographic or map information. Microdata was the least



frequent response, indicated by 42 percent of respondents.

The types of information customers found useful varied little by customer types. Most customers found information about new products, summary data files, and key highlights from new reports equally useful. However, Federal government respondents favored key highlights over summary data files.

Forty-four respondents wrote in answers. These comments included requests for data from other agencies, the need for indexes to better find information on the Internet, and specific items that users would like to see such as announcements of problems, a listing of new reports, press releases, an online version of *Census and You*, and international information.

Table 5, below, shows the type of information respondents would find useful on the Internet.

Appendix B includes a complete list of the write-in responses.

Table 5 : Types of Information Useful to Respondents		
	Number of Responses	Percent of Respondents to Question
Summary data files	292	71%
Information about new products	288	70%
Key highlights from new reports	264	64%
Text of printed reports	251	61%
Geographic or map information	215	52%
Microdata such as the 1990 PUMS	171	42%
Other	41	10%
No answer	105	20%

Question 4: How do you access Internet?

The overwhelming majority (71 percent) of respondents accessed Internet through a school or work node. Many of the "other" write-in entries referred to a specific work or school access. About 12 percent indicated commercial services such as America Online, Compuserv, and Prodigy. Most respondents indicated a single source, however multiple answers were allowed to this question.

Several services were written-in by more than one respondent and are included in table 6, below. Appendix C lists other specific write-in responses.

Table 6 : How respondents access Internet		
Access	Number of Responses	Percent
School or work node	293	71%
Other	81	19%
America Online	25	6%
Compuserv	20	5%
Prodigy	9	2%
DIALOG	2	0%
Local Internet service (Write-in)	12	3%
NETCOM (Write-in)	6	1%
No answer	105	20%

Over 90 percent of Federal government and academic respondents accessed Internet through a school or work node. The business sector showed the most diverse access and use of commercial services.

Question 5: [If you do not currently access the Internet] Which of the following statements are true regarding your access to Internet?

Respondents who answered "Never/No access" to Internet in Question 1 were instructed to answer Question 5. Ninety-four respondents (20 more than had indicated no access in Question 1) responded to Question 5. Multiple answers were allowed.

Respondents to this question were almost equally divided about their reasons for not using Internet. They cited lack of hardware/software(45 percent) or simple lack of access (46 percent). Slightly less (37 percent) cited lack of knowledge of how to access.

There were 19 write-in responses. Users identified particular barriers to access such as no need, approvals required, cost, time limitations, etc. Appendix D lists these write-in responses.

Table 7 : Why respondents do not use Internet		
Reason	Number of Responses	Percent
Do not have hardware/software	42	45%
Do not have access	43	46%
Do not know how to access	35	37%
Other	19	20%
Find Internet too difficult	7	7%
No interest	6	6%
Too expensive (Write-in)	3	3%
No time (Write-in)	3	3%

No Federal government respondents answered this question and only 3 percent of the academic respondents indicated any lack of access to the Internet.

As mentioned earlier, about half the New York and Texas State Data Center affiliates indicated lack of access in Question 1. On Question 5, they cited lack of access as the principal reason for not being on Internet, followed by lack of hardware/software and lack of knowledge.

Question 6: [If you do not currently access the Internet,] When do you plan to have access to the Internet?

This was a follow-on to Question 5 for respondents who answered "Never/No access" in Question 1. Fifty-eight respondents answered this question, 36 less than had answered Question 5.

More than 70 percent of respondents to this question indicated that they would have Internet access within the next year; 45 percent expected access within the next 6 months. Ten percent indicated that they would never have access.

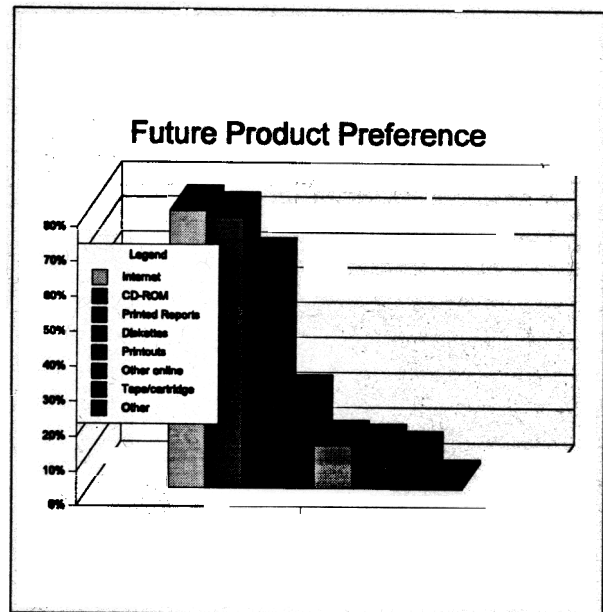
Table 8 : When users plan to have access to Internet		
	Number of Responses	Percent
Within the next 6 months	26	45%
Within the next year	15	26%
Within the next 2 years	11	19%
Never	6	10%

Question 7: In the future, how would you prefer to receive or access Census Bureau data?

Respondents were almost equally divided in their preferences for online Internet access and CD-ROM as the media for future Census Bureau data delivery: 79 versus 77 percent respectively. Somewhat less indicated printed reports: 64 percent. Multiple responses were allowed and most respondents indicated two or more preferences.

It is interesting to note that even though many respondents were technologically sophisticated and knowledgeable Internet users, they nevertheless indicated preferences for Census Bureau information in additional formats, particularly CD-ROM and printed reports.

It should also be noted that the Census Bureau has asked similar questions in several product surveys over the past 3 years. Responses have indicated a growing demand for online dissemination. In a 1993 survey, only 3.3 percent of respondents indicated a preference for data online. In a 1994 survey of TIGER/Line File users, almost 40 percent indicated online services, with Internet identified separately by 35 percent of respondents.



There were 7 write-in responses. Applicable responses included:

- o Fax as needed
- o As appropriate to the data
- o State data center bulletin board
- o Publicly accessible CENDATA site, not through a private vendor.

While most customer types indicated a preference for Internet followed by CD-ROM, there were some differences among customer types. Preference for CD-ROMs was lowest among Federal government users (23 percent), and highest among state and local government respondents (89 percent). Media, Federal government, other business, and religious/civic/political group respondents all preferred printed reports over

CD-ROM. The business sector showed the highest preference for other online dissemination. These preferences are illustrated in the figure, above, and in table 9, below.

Table 9 : Preferred Media by Customer Type										
Customer Type	Online: Internet		CD-ROM		Printed Reports		Diskettes		Printouts	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Private Citizen	1	50%	0	0%	1	50%	0	0%	0	0%
Governmental Sector	112	67%	140	84%	101	60%	38	23%	24	14%
Federal Government	10	77%	3	23%	8	62%	3	23%	2	15%
State or local government	102	66%	137	89%	93	60%	35	23%	22	14%
Academic Research	180	90%	153	78%	130	66%	55	28%	17	9%
College/University faculty	112	90%	97	78%	84	67%	35	28%	9	7%
Other College/University	68	96%	56	79%	46	65%	20	28%	8	11%
Business Sector	89	76%	79	68%	73	62%	31	26%	17	15%
Media	3	50%	4	67%	5	83%	4	67%	0	0%
Market research, advertising	38	83%	35	76%	23	50%	10	22%	6	13%
Other Business	48	74%	40	62%	45	69%	17	26%	11	17%
Public Service Sector	8	80%	6	60%	8	80%	0	0%	2	20%
TOTAL RESPONSES	398	79%	386	77%	321	64%	126	25%	61	12%

Table 9 Continued: Preferred Media by Customer Type						
Customer Type	Online: Other		Computer tape/ Cartridge		Other	
	Number	Percent	Number	Percent	Number	Percent
Private Citizen	0	0%	0	0%	0	0%
Governmental Sector	23	14%	9	5%	2	1%
Federal Government	1	8%	0	0%	0	0%
State or local government	22	14%	9	6%	2	1%
Academic Research	5	3%	26	13%	2	1%
College/University faculty	0	0%	17	13%	2	1%
Other College/University	5	7%	9	13%	1	1%
Business Sector	26	22%	7	6%	2	2%
Media	1	17%	0	0%	0	0%
Market research, advertising	12	26%	3	7%	2	4%
Other Business	13	20%	4	6%	0	0%
Public Service Sector	1	10%	0	0%	1	10%
TOTAL RESPONSES	56	11%	44	9%	7	1%

Appendix B: Write-in Responses to Question 3: What types of information would be useful to you on the Internet?

1. OPACS (Online Public Access Catalogs) (2)
2. Government information.
3. Public press releases.
4. Online equivalent of *Census and You*.
5. Detailed data.
6. SIPP microdata; AHS data when available.
7. A good index of products and titles.
8. Capability to order census products.
9. Tables from previous censuses.
10. Searchable statistics—i.e., number of Hispanic adolescent suicides.
11. Census Tract Street Index.
12. Census Transportation Planning S--.
13. Government finances for all locations.
14. Detailed estimates of current demographic data on a regional and local level.
15. Complete data files.
16. International information.
17. Complete up-to-date listing of what's there.
18. Indexes to information on the Internet.
19. Special interests.
20. Announcements of problems.
21. Current statistical information (2).
22. Consumer Price Index.
23. Directories, library catalogs, government agency info (gifts).
24. Industry news.

25. Bureau of Labor Statistics.
26. Educational reports, material.
27. A listing of all new Department of Commerce reports, including the Census Bureau.
28. Full text of tables.
29. Private e-mail.
30. Demographic housing construction by census district.
31. User friendly.
32. All info would be useful if it was possible to find on the Internet.
33. Census/survey of governments.
34. Federal data sets.
35. Non-census data.
36. Legislative information.
37. Index telling me where to find topic I'm interested in.

Appendix C: Write-in Responses to Question 4: How do you access Internet?

- Local Internet service (16).
- 2. NETCOM (6).
- 3. Commercial provider (4).
- 4. PPP (3).
- 5. Western Library Network (2).
- 6. ECONET (2).
- 7. Cerfnet (2).
- 8. Infinet (2)
- 9. BBS (Bulletin Board System) (2).
- 10. PSI.
- 11. Tenet.edu.
- 12. GES.
- 13. Delphi.
- 14. IBM Gateway.
- 15. Netscape via LAN.
- 16. Private provider.
- 17. Netcruiser.
- 18. Slip connection via Mrnet.
- 19. Mosaic.
- 20. Put some info in it.
- 21. Local dial, slip.
- 22. Library system node.
- 23. Local network.
- 24. Company node.
- 25. LINK.

26. Library of Virginia.
27. Colorado Supernet.
28. University node.
29. Pipeline.
30. SAILOR- Maryland's free public access.
31. Coral.
32. Dial Up for personal use.
33. Automated catalog connection.
34. Library network.
35. Test-based access.
36. Free net.
37. Florida Information Resource Network.
38. Digital Express.
39. Winsock.
40. Telnet
41. TDH is connected through state.
42. Server site.
43. Agency server.
44. WWW NETSCAPE.
45. CTC.
46. United Nations.

Appendix D: Write-in Answers to Question 5: Which of the following statements are true regarding your access to Internet?

- Too expensive (3).
- 2. Too busy/Limited time.
- 3. Don't have immediate need and can have others access.
- 4. Working on securing access (2)
- 5. Better services exist--Census bulletin board, Economic bulletin board, CD-ROM.
- 6. Use America On Line.
- 7. We have access to Internet through a nearby university.
- 8. Have not yet identified cost-effective resources.
- 9. find Internet has no organization.
- 10. Requires approval of program director.